

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A method for producing a transfer sheet, which comprises the steps of:

(i) imaging a transfer sheet with sublimation dyes, wherein said transfer sheet comprises:

a support having a first and second surface, and

a barrier layer having a first and second surface, wherein the first surface of said barrier layer is applied to the first surface of said support, and wherein a sublimation dye image is applied to the second surface of said barrier layer; and

(ii) applying a first surface of a polymer layer, having a first and second surface, to said sublimation dye image applied to the second surface of said barrier layer, wherein said polymer layer comprises (a) a thermoplastic polymer that enters a secondary phase transition stage when heated to a temperature which is approximately the same as a sublimation temperature of said sublimation dye; (b) an elastomeric emulsion, (c) a water repellent and (d) a plasticizer, provided that the polymer layer does not comprise thermosetting materials, and wherein said barrier layer allows for cold release of said sublimation dye layer and said polymer layer from said support after heat transfer.

2. (Currently Amended) A method of applying a sublimation dye image to a receptor element, which comprises, in the following order, the steps of:

(i) imaging a transfer sheet with sublimation dyes, wherein said transfer sheet comprises:
a support having a first and second surface, and

a barrier layer having a first and second surface, wherein the first surface of said barrier layer is applied to the first surface of said support, and wherein said sublimation dye image is applied to the second surface of said barrier layer;

(ii) applying a first surface of a polymer layer, having a first and second surface, to said image applied to the second surface of said barrier layer to produce a transfer sheet, wherein said polymer layer comprises (a) a thermoplastic polymer that enters a secondary phase transition stage when heated to a temperature which is approximately the same as a sublimation temperature of said sublimation dye (b) an elastomeric emulsion, (c) a water repellent and (d) a plasticizer, provided that the polymer layer does not comprise thermosetting materials, and wherein said barrier layer allows for cold release of said sublimation dye layer and said polymer layer from said support after heat transfer;

(iii) positioning the second surface of said ~~polyester~~ polymer layer against said receptor element;

(iv) applying heat energy to the rear surface of the transfer sheet to transfer said sublimation dye image and said polymer layer to said receptor element, wherein said sublimation dyes sublimate and penetrate into said polymer layer adhered to said receptor element; and

(v) stripping said transfer sheet away from said receptor element, wherein the sublimation dye image-containing polymer layer is adhered to said receptor element.

3. (Original) The method of claim 1 or 2, wherein said imaging is provided by ink jet, offset, gravure, flexographic, laser or screen printing.

4. (Original) The method of claim 1 or 2, wherein said support is selected from the group consisting of a paper support, a film support and cellulosic nonwoven webs.

5. (Original) The method of claim 4, wherein said film support comprises a polyester.

6. (Original) The method of claim 1 or 2, wherein said sublimation dyes are a four to eight color dye sublimation ink set.

7. (Original) The method of claim 1 or 2, wherein the polyester layer is applied by using gravure, cascade, metered rod, fountain or air knife coating methods.

8. (Previously Presented) The method of claim 7, wherein the heat energy is applied using a hand iron or a heat press.

9. (Original) The method of claim 2, wherein the receptor element is 100% cotton fabric or a cotton/polyester blend fabric.

10. (Original) The method of claim 2, wherein the receptor element is selected from the group consisting of ceramic, glass, wood, plastic and metal surfaces.

11. (Original) The method of claim 1 or 2, wherein the barrier layer comprises a polymer dispersion.

12. (Original) The method of claim 11, wherein the polymer dispersion comprises one or more of the components selected from the group consisting of polyacrylates, styrene-butadiene copolymers, ethylene-vinyl acetate copolymers, nitrile rubbers, poly(vinylchloride),

poly(vinylacetate) and ethylene-acrylate copolymers.

13. (Original) The method of claim 12, wherein the polymer dispersion comprises polyvinyl acetate dibutyl maleate copolymer.

14. (Previously Presented) The method of claim 1 or 2, wherein said thermoplastic polymer melts in the range of about 60°C to 270°C.

15. (Previously Presented) The method of claim 1 or 2, wherein said thermoplastic polymer is selected from the group consisting of polyacrylates, polyacrylic acid, polymethacrylates, polyvinyl acetates, copolymer blends of vinyl acetate and ethylene/acrylic acid copolymers.

16. (Previously Presented) The method of claim 1 or 2, wherein the polymer layer further comprises performance additives.

17. (Previously Presented) The method of claim 1 or 2, wherein said water repellent is a polyurethane dispersion and said plasticizer is polyethylene glycol.

18. (Previously Presented) A transfer sheet having a first and second surface, comprising

- (i) a support layer having a first and second surface,
- (ii) a barrier layer applied to the second surface of said support layer,
- (iii) a dye sublimation ink-containing layer applied to said barrier layer, and
- (iv) a polymer layer applied to said dye sublimation ink-containing layer, wherein said polymer layer comprises (a) a thermoplastic polymer that enters a secondary

phase transition stage when heated to a temperature which is approximately the same as a sublimation temperature of said dye sublimation ink (b) an elastomeric emulsion, (c) a water repellent and (d) a plasticizer, provided that the polymer layer does not contain thermosetting materials,
wherein said barrier layer allows for cold release of said sublimation dye layer and said polymer layer from said support after heat transfer.

19. (Currently Amended) A method of transferring an sublimation dye image to a receptor element comprising:

- (i) providing a transfer sheet having a front and a back surface, which comprises, in the following order, the layers:
 - (a) a support,
 - (b) a barrier layer,
 - (c) a dye sublimation ink-containing layer, and
 - (d) a polymer layer, wherein said polymer layer comprises (a) a thermoplastic polymer that enters a secondary phase transition stage when heated to a temperature which is approximately the same as a sublimation temperature of said dye sublimation ink (b) an elastomeric emulsion, (c) a water repellent and (d) a plasticizer, provided the ~~polyester~~ polymer layer does not contain thermosetting materials, and wherein said barrier layer allows for cold release of said dye sublimation-ink containing layer and said polymer layer from said support after heat transfer;

- (ii) positioning the front surface of said transfer sheet against a receptor element;
- (iii) applying heat energy to the rear surface of the transfer sheet to transfer said sublimation dye image to said receptor element, wherein said sublimation dyes sublimate and penetrate into said polymer layer adhered to said receptor element; and
- (iv) stripping said transfer sheet away from said receptor element, wherein the sublimation dye image-containing polymer layer is embedded in said receptor element.

20. (Original) A kit comprising at least one transfer sheet according to claim 18.

21. (Original) A kit according to claim 20, further comprising a receptor element.

22. (Previously Presented) A kit comprising:

- (i) a support layer having a first and second surface,
- (ii) a barrier layer applied to the second surface of said support layer,
- (iii) a marking agent containing at least one sublimation dye,

a polymer material to be applied to said marking agent, wherein said polymer material comprises
(a) a thermoplastic polymer that enters a secondary phase transition stage when heated to a temperature which is approximately the same as a sublimation temperature of said sublimation dye (b) an elastomeric emulsion, (c) a water repellent and (d) a plasticizer, provided that the polymer material does not contain thermosetting materials, and wherein said barrier layer allows for cold release of said sublimation dye and said polymer material from said support after heat

transfer.

23. (Previously Presented) The method of claim 1 or 2, wherein the barrier layer comprises a thermosetting polymer.